An eſſay on COMETS, *and an account of their* luminous appearance; *together with ſome conjectures concerning the origin of* HEAT. *By* HUGH WILLIAMSON, *M. D.* *p.* 133

Obſervations on the COMET *of June and July, 1770; with the Elements of its Motion, and the Trajectory of its Path, in two Letters, from* DAVID RITTENHOUSE, *A. M. to* WILLIAM SMITH, *D. D. Provoſt Coll. Philadelphia.* *p.* 144

An Account of the ſame COMET, *in a letter from the Right Hon.* WILLIAM, EARL OF STIRLING, *to* WILLIAM SMITH, *D. D. Provoſt Coll. Philad.* *p.* 152

An eaſy Method of deducing the Time of the Sun's paſſing the Meridian per Clock, without the help of the Equation Tables, by equal Altitudes taken on two ſucceeding Days. By DAVID RITTENHOUSE, *A. M. Communicated by* WILLIAM SMITH, *D. D. Provoſt Coll. Philadelphia.* *p.* 155

An Account of the Tranſit of MERCURY *over the* SUN, *Nov. 9th, as obſerved at* NORRITON, *in Pennſylvania; by the Committee appointed for that Obſervation. Drawn up and communicated by direction and in behalf of the Committee, by* WILLIAM SMITH. *D. D. Provoſt Coll. Philadelphia.* *p.* 158

The SUN'S PARALLAX *deduced from a Compariſon of the* NORRITON *Obſervations of the Tranſit of Venus, 1769; with the* GREENWICH *and other* European *Obſervations of the ſame. By* WILLIAM SMITH. *D. D. Provoſt Coll. Phila.* *p.* 162

CONTENTS of SECT. II.

An Eſſay on the Cultivation of the Vine, and the making and preſerving of Wine, ſuited to the different climates of North-America. By the Hon. *EDWARD ANTILL *Eſq. Communicated by Mr.* CHARLES THOMSON. *p.* 180

The Method of curing FIGS; *and obſervations on the raiſing and dreſſing of* HEMP, *By Hon.* EDWARD ANTILL, *Eſq.* *p.* 266

Obſervations concerning the FLY-WEEVIL, *that deſtroys the* WHEAT; *with ſome uſeful diſcoveries and Concluſions, concerning the Propagation and Progreſs of that pernicious Inſect, and the Methods to be uſed for preventing the Deſtruction of the Grain by it. By Colonel* LANGDON CARTER, *of Sabine-Hall, Virginia; communicated by Colonel* LEE, *of Virginia.* *p.* 274

Obſervations on the ſame ſubject; by the Committee of Huſbandry, &c. *p.* 287

Obſervations on the NATIVE SILK WORMS, *of North-America; by Mr.* MOSES BARTRAM. *p.* 294

A Memoir on the Diſtillation of PERSIMONS. *By Mr.* ISAAC BARTRAM. *p.* 301

Account of an OIL *made from the Seeds of the* Sun-Flower. *By Dr.* OTTO, *of Bethlehem. Communicated by Dr.* THOMAS BOND. *p.* 304

An Eſſay on the expreſſing of OIL *from the* SUN-FLOWER SEED. *By* JOHN MORGAN, *M. D.* *p.* 305

A Letter on the expreſſing of a fine Oil from BENE SEED. *By Mr.* JOHN MOREL, *of Georgia. Communicated by Mr.* CHARLES THOMSON. *p.* 309

The Method of deſtroying WILD GARLIC. *By Mr.* HENRY HOLLINGSWORTH, *of Elk-Ridge.* *p.* 311

A Method of preſerving Peaſe from the Worms. By Mr. PETER MILLER, *of Ephrata. Communicated by Mr.* CHARLES THOMSON. *p.* 313

An eaſy Method of preſerving SUBJECTS *in Spirits. By Mr.* L. NICOLA. *p.* 314

A Letter from Bethlehem, on making CURRANT WINE. *p.* 317

A Letter from Dr. LORIMER, *of Weſt-Florida, to* HUGH WILLIAMSON. *M. D. containing ſome Remarks on the Climate, vegetable Productions, &c.* *p.* 320

A catalogue of ſuch foreign Plants as are worthy of being encouraged in the American Colonies, for the Purpoſes of Medicine, Agriculture and Commerce. *p.* 325

Directions

* Mr. ANTILL was one of his Majeſty's Council for the Province of New-Jerſey, and a worthy Member of the *American Philoſophical Society*; but he died before the publication of the Liſt prefixed to this Volume.

Directions for putting up Seeds and Plants, ſo as to preſerve them in a ſtate of Vegetation, for being tranſported to diſtant countries. p. 330
An Attempt to account for the Change of Climate, which has been obſerved in the Middle Colonies in North-America. By HUGH WILLIAMSON, *M. D.* p. 336

CONTENTS of SECT. III.

An Account of the Eruption of Mount Veſuvius, in 1767; in a Letter from an Engliſh Gentleman reſiding at Naples. to JOHN MORGAN, *M. D. Prof. Med. Coll. Philadelphia.* p. 345
A Deſcription of a Self-moving or SENTINEL REGISTER; *invented by Mr.* WILLIAM HENRY, *of Lancaſter, in Pennſylvania.* p. 350
An Account of a Machine for pumping Veſſels at Sea without the Labour of Men. By Mr. RICHARD WELLS. p. 353
An Abſtract of ſundry Papers and Propoſals for improving the Inland Navigation of Pennſylvania and Maryland, by opening a Communication between the Tide-Waters af Delaware and Cheſapeak-Bay, illuſtrated with a Map, &c. p. 357
A Deſcription of a Machine for cutting Files. p. 365

CONTENTS of SECT. IV.

An Analyſis of the Chalybeate Waters of Briſtol, in Pennſylvania; in two Letters from Dr. JOHN DE NORMANDIE *of Briſtol, to Dr.* THOMAS BOND *of Philadelphia, V. P. of the American Philoſophical Society.* p. 368
Remarkable Caſe of a TETANOS *and* LOCKED JAW *cured by amazing Quantities of Opium; by Dr.* ARCHIBALD GLOSTER, *of Antigua; communicated by* JOHN MORGAN, *M. D. Prof. Phyſic, Coll. Philadelphia.* p. 379
An Account of the Effects of the STRAMMONIUM, *or Thorn Apple. By* BENJAMIN RUSH, *M. D. Prof. Chym. Coll. Philadelphia.* p. 384
An Enquiry into the Nature, Cauſe and Cure of the ANGINA SUFFOCATIVA, *or Sore Throat Diſtemper. By* SAMUEL BARD, *M. D. Prof. Phyſic, King's Coll. New-York; communicated by* JOHN MORGAN, *M. D. Prof. Phyſic, College Philadelphia.* p. 388
An Account of an Aurora Borealis, *from a Correſpondent at Lancaſter, in Pennſylvania.* p. 404
An Account of a Horizontal Wind-Mill. *by Mr.* THOMAS GILPIN. 405
An Account of a new Species of Grape Vines, *by Mr.* JOHN JONES, *at Indian River, Worceſter County, Maryland.* p. 406

PREFACE.